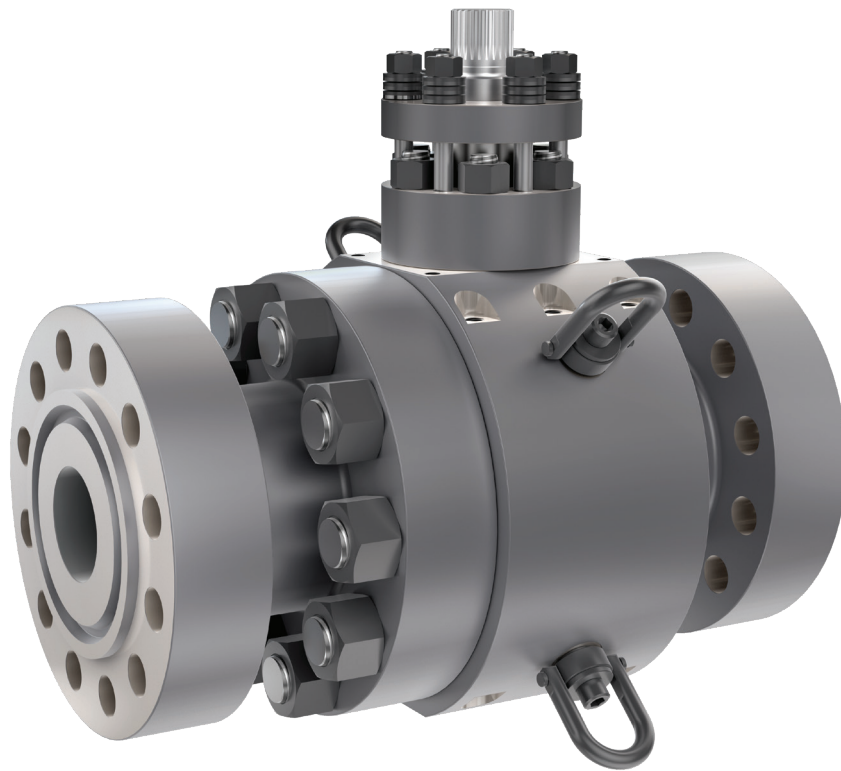


**Argus<sup>®</sup> FK75F**  
**Metal-Seated Floating Ball Valve**  
**for Critical Services**



## Reliable shut-off in critical services

The Argus FK75F metal-seated, floating ball valve from Flowserve is engineered to provide consistently tight shut-off in critical and severe-duty services. Constructed from forged materials, the Argus FK75F valve is compliant with ASME B16.34 and API 608 standards. It is also tested in accordance with API 598.

Its bolted-joint design adheres to the ASME Section VIII, Mandatory Appendix 2 guidelines, ensuring a robust and secure connection to safeguard against fluctuating temperatures, piping stresses and design pressures. The valve also meets many industry standards, such as ASME B16.10 end-to-end lengths and ASME B16.5 flange requirements.

### Customized for your application

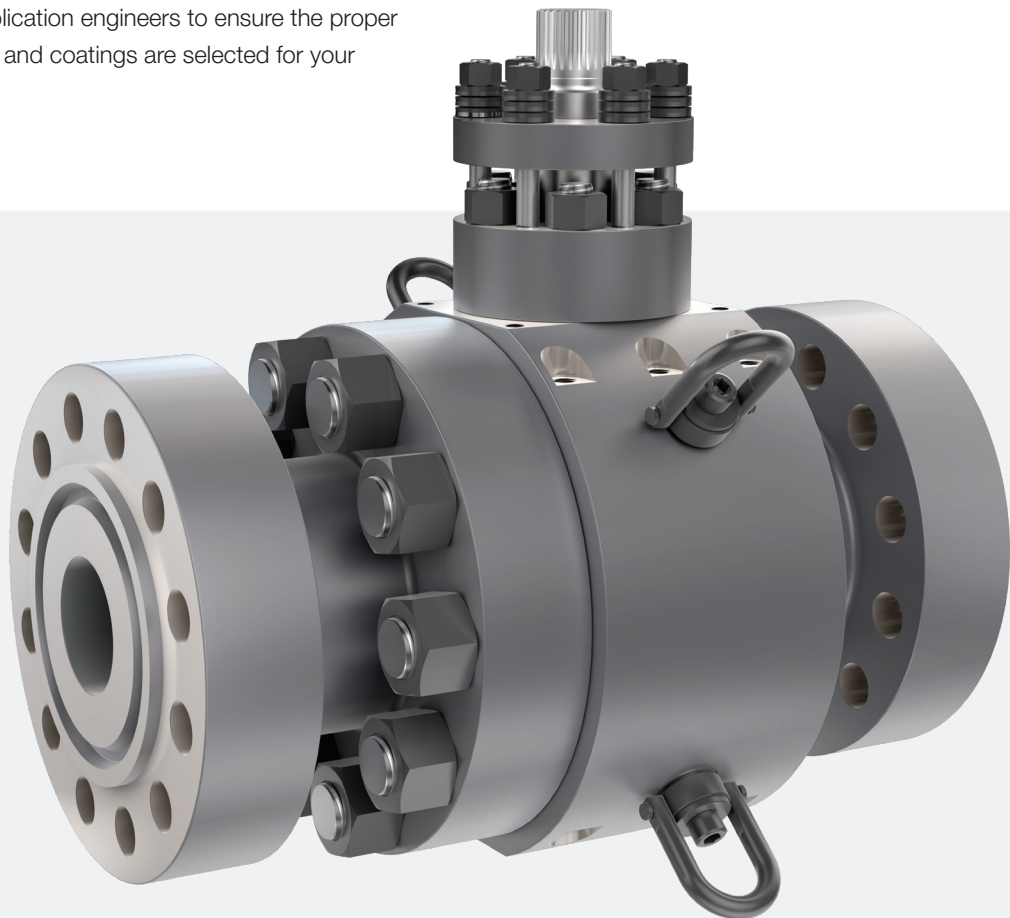
The Argus FK75F valve is fully customizable. Each application is reviewed by our application engineers to ensure the proper valve model, materials and coatings are selected for your particular application.

It can be configured with various end types, including butt-welded, socket-welded and industry-recognized, hub-type connectors such as Grayloc, Vector and Galperti. In addition, it is available in full- or reduced-port designs to fit your specific application needs.

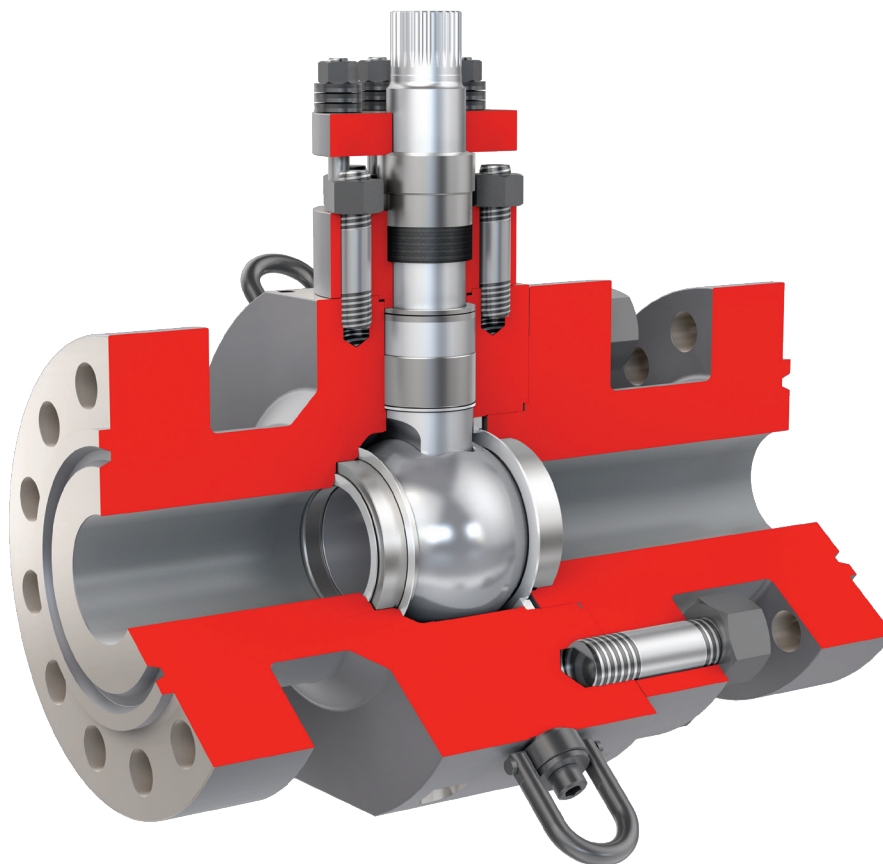
It is available with uni-directional sealing capabilities as standard. It provides reliable sealing in refinery, petrochemical, power (renewable and fossil) and mining. Please consult factory for bi-directional sealing capability.

### Easy to maintain

The Argus FK75F critical service valve has been designed to be easier for maintenance. Its operational spare parts can be repaired and replaced without any need for special tools.



## Materials of construction



**Table 1: Materials of construction**

Components	Valve Construction	
	Carbon Steel	Stainless Steel
<b>Temperature Range</b>	-29°C to 425°C (-20°F to 800°F)	-46°C to 538°C (-50°F to 1,000°F) <sup>(1)</sup>
<b>Body/End Connect/Bonnet</b>	A105/A350 Grade LF2, Class 1 or Class 2 <sup>(2)</sup>	A182 F316/A182 F347H
<b>Stud and Nut at Body/Bonnet</b>	A193 B7M /A194 Grade 2HM A193 B7/A194 Grade 7	A453 Grade 660, Class B
<b>Gland</b>	A182 F316	A182 F316
<b>Stud and Nut at Gland</b>	A453 Grade 660, Class B	A453 Grade 660, Class B
<b>Ball and Seat</b>	F22/Inconel® 625/Inconel 718	A182 F316/Inconel 625/Inconel 718
<b>Ball and Seat Coating</b>	Arguloy (Spray and Fuse)	Arguloy (Spray and Fuse)
<b>Stem</b>	A638 Grade 660/Inconel 718	A638 Grade 660/Inconel 718
<b>Bushing Stem</b>	PMT-625 Plus and Reinz AFM7	PMT-625 Plus and Reinz AFM7
<b>Thrust Washer Stem</b>	A182 F316 With Arguloy	A182 F316 With Arguloy
<b>Gasket at Body/End Connect</b>	Graphite/Camprofile Gasket (AISI 316 + Graphite)	Graphite/Camprofile Gasket (AISI 316 + Graphite)
<b>Gasket at Body/Bonnet</b>	Graphite/Camprofile Gasket (AISI 316 + Graphite)	Graphite/Camprofile Gasket (AISI 316 + Graphite)
<b>Gasket Back Seat</b>	Graphite/Reinforced Graphite	Graphite/Reinforced Graphite
<b>Packing Stem</b>	Graphite: Supagrat® Premier	Graphite: Supagrat Premier

Notes: Other materials, including special alloys and alternative coatings, available on request. Please contact Flowserve for more information.

® Inconel is a registered trademark of the International Nickel Co., Inc.

(1) For temperatures higher than 538°C (1,000°F), please consult factory.

(2) A350 Grade LF2, Class 2 requires an impact test to -29°C (-20°F).

## Arguloy spray and fuse coating

Argus is one of the first manufacturers of metal seated ball valves, and began developing spray and fuse coatings in the 1980s. This deep experience enables Flowserve to provide customized solutions for the most abrasive and severe conditions.

The Argus FK75F ball valve comes standard with our Arguloy spray and fuse coating on the ball and seats. It's a cobalt or iron, self-fluxing, hard alloy applied to metallic base materials using a powder flame spraying process. Heat treating alloys the coating to the base material. The coating's adhesive strength results from a metallurgical bond with the base material. The resulting hardened layer is homogeneous, free of cracks, and extremely corrosion and wear resistant.

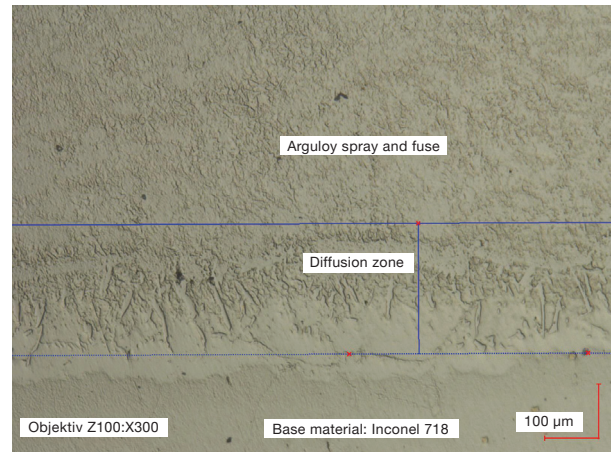
Flowserve ensures the highest quality by using modern computer-controlled machinery and innovative engineering methods at our state-of-the-art coatings center. We can produce metal trim seats with high spherical accuracies and super-fine surface finishes to ensure gas tightness is tested at high pressures and temperatures, according to customer needs, based on our in-house automated lapping capabilities.

Coating shear tests are available on request.

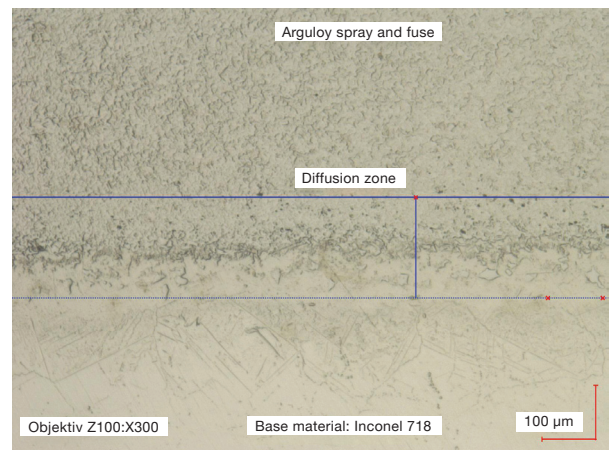
Please contact factory for full technical details.

**Table 2: Arguloy coating at-a-glance**

Advantages	<ul style="list-style-type: none"> <li>• Closed porosity</li> <li>• Metallurgical bond</li> <li>• Impact resistant</li> <li>• Retains its functional properties, even with wear and tear</li> <li>• Corrosion resistant to a variety of liquid and gaseous media, especially bases and oxidizing acids at higher temperatures</li> </ul>
Disadvantages	<ul style="list-style-type: none"> <li>• Restrictions in base materials (clarification on request)</li> </ul>
Applications	<ul style="list-style-type: none"> <li>• Severe service (erosive, abrasive, corrosive)</li> <li>• High-pressure critical gases</li> <li>• High-pressure steam</li> <li>• Thermal cycling/shock</li> <li>• Solid particle handling</li> <li>• High operating cycles</li> </ul>



Coating option: Cobalt base material



Coating option: Iron base material

## Sectional drawings

**Table 3: Sectional drawings**

Valve Size <sup>(1)</sup>		Sectional Drawing No.					
DN	NPS	Class 150	Class 300	Class 600	Class 900	Class 1500	Class 2500
50	2	30013577	30013637	30012994	30012128	30011893	30011780
80	3	30013591	30013643	30013012	30012156	30011904	30011790
100	4	30013573	30013647	30013026	30012132	30011898	30011789
150	6	30013618	30013677	30013001	30012158	30011913	30011796
200	8	30013583	30013667	30013013	30012176	30011932	30010309
250	10	30013608	30013596	30013016	30012187	30011925	30011803
300	12	30013546	30013543	30012977	30012134	30011919	30011808

## Flow coefficients

**Table 4: Cv**

Valve Size <sup>(1)</sup>		Cv					
DN	NPS	Class 150	Class 300	Class 600	Class 900	Class 1500	Class 2500
50	2	501	454	391	319	319	163
80	3	1,411	1,197	1,067	956	771	412
100	4	2,820	2,442	2,051	1,897	1,461	717
150	6	6,229	6,154	5,228	4,590	3,568	1,832
200	8	12,296	12,843	10,231	8,314	6,517	3,526
250	10	19,978	21,579	16,443	13,870	10,651	5,761
300	12	30,170	33,258	25,729	20,133	15,448	8,531

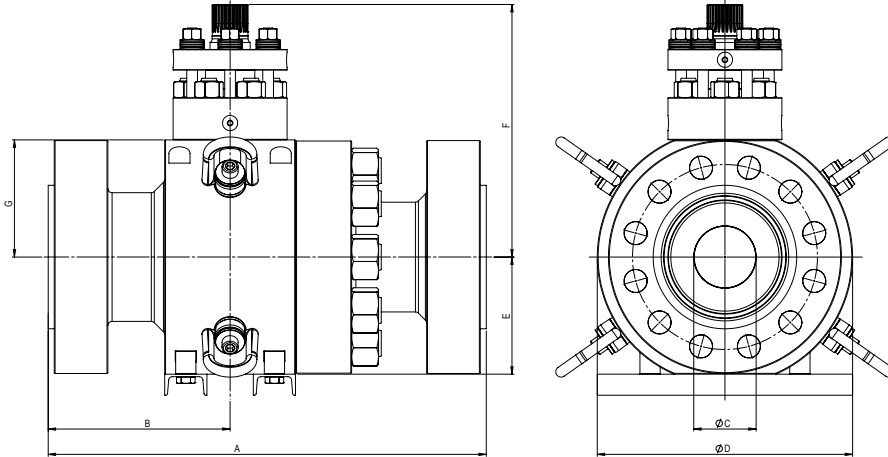
**Table 5: Kv<sup>(2)</sup>**

Valve Size <sup>(1)</sup>		Kv					
DN	NPS	Class 150	Class 300	Class 600	Class 900	Class 1500	Class 2500
50	2	429	389	335	273	273	140
80	3	1,209	1,026	914	819	661	353
100	4	2,417	2,093	1,758	1,626	1,252	614
150	6	5,338	5,274	4,480	3,934	3,058	1,570
200	8	10,538	11,006	8,768	7,125	5,585	3,022
250	10	17,121	18,493	14,092	11,887	9,128	4,937
300	12	25,856	28,502	22,050	17,254	13,239	7,311

(1) For sizes smaller than DN 50/NPS 2 and larger than DN 300/NPS 12, please consult factory.

(2)  $Kv = 0.857(Cv)$

## Dimensions and weights – Valve (without stand and lifting lugs)



**Table 6: Full bore design with raised face flanges – Class 150**

Valve Size <sup>(1)</sup>		Dimensions, mm (in.)							Dimensional Drawing No.	Weight, kg (lb)
DN	NPS	A	B	C <sup>(2)</sup>	D	E	F	G		
50	2	178 (7.01)	75 (2.95)	50.8 (2.0)	190 (7.48)	85 (3.35)	217 (8.54)	85 (3.35)	30013581	24 (53)
80	3	203 (7.99)	88 (3.46)	76.2 (3.0)	235 (9.25)	105 (4.13)	241 (9.49)	105 (4.13)	30013594	39 (86)
100	4	229 (9.02)	100 (3.94)	101.6 (4.0)	280 (11.02)	132.5 (5.22)	282.5 (11.12)	132.5 (5.22)	30013574	67 (148)
150	6	394 (15.51)	175 (6.89)	152.4 (6.0)	370 (14.57)	175 (6.89)	339 (13.35)	175 (6.89)	30013619	160 (353)
200	8	457 (17.99)	210 (8.27)	203.2 (8.0)	460 (18.11)	220 (8.66)	401 (15.79)	220 (8.66)	30013584	288 (635)
250	10	533 (20.98)	255 (10.04)	254 (10.0)	555 (21.85)	267.5 (10.53)	495.5 (19.51)	267.5 (10.53)	30013609	483 (1,065)
300	12	610 (24.02)	295 (11.61)	304.8 (12.0)	650 (25.59)	312.5 (12.30)	550.5 (21.67)	312.5 (12.30)	30013547	768 (1,693)

**Table 7: Full bore design with raised face flanges – Class 300**

Valve Size <sup>(1)</sup>		Dimensions, mm (in.)							Dimensional Drawing No.	Weight, kg (lb)
DN	NPS	A	B	C <sup>(2)</sup>	D	E	F	G		
50	2	216 (8.50)	95 (3.74)	50.8 (2.0)	190 (7.48)	85 (3.35)	221 (8.70)	85 (3.35)	30013641	30 (66)
80	3	282 (11.10)	125 (4.92)	76.2 (3.0)	245 (9.65)	110 (4.33)	265 (10.43)	110 (4.33)	30013645	63 (139)
100	4	305 (12.01)	135 (5.31)	101.6 (4.0)	290 (11.42)	132.5 (5.22)	296.5 (11.67)	132.5 (5.22)	30013648	92 (203)
150	6	403 (15.87)	170 (6.69)	152.4 (6.0)	395 (15.55)	185 (7.28)	388 (15.28)	185 (7.28)	30013652	213 (470)
200	8	502 (19.76)	220 (8.66)	203.2 (8.0)	480 (18.90)	227.5 (8.96)	460.5 (18.13)	227.5 (8.96)	30013668	378 (833)
250	10	568 (22.36)	265 (10.43)	254 (10.0)	575 (22.64)	272.5 (10.73)	534.5 (21.04)	272.5 (10.73)	30013597	606 (1,336)
300	12	648 (25.51)	310 (12.20)	304.8 (12.0)	670 (26.38)	317.5 (12.50)	607.5 (23.92)	317.5 (12.50)	30013544	938 (2,068)

**Table 8: Full bore design with raised face flanges – Class 600**

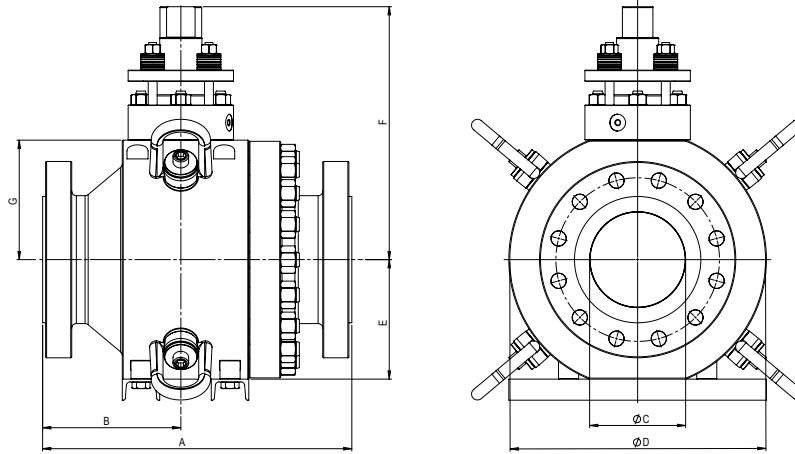
Valve Size <sup>(1)</sup>		Dimensions, mm (in.)							Dimensional Drawing No.	Weight, kg (lb)
DN	NPS	A	B	C <sup>(2)(3)</sup>	D	E	F	G		
50	2	292 (11.50)	130 (5.12)	50.8 (2.0)	210 (8.27)	92.5 (3.64)	248.5 (9.78)	92.5 (3.64)	30013007	45 (99)
80	3	356 (14.02)	160 (6.30)	76.2 (3.0)	270 (10.63)	122.5 (4.82)	293.5 (11.56)	122.5 (4.82)	30013008	88 (194)
100	4	432 (17.01)	185 (7.28)	101.6 (4.0)	325 (12.80)	147.5 (5.81)	340.5 (13.41)	147.5 (5.81)	30013015	162 (357)
150	6	559 (22.01)	244 (9.61)	152.4 (6.0)	445 (17.52)	202.5 (7.97)	441.50 (17.38)	202.5 (7.97)	30012983	377 (831)
200	8	660 (25.98)	295 (11.61)	203.2 (8.0)	550 (21.65)	255 (10.04)	540 (21.26)	255 (10.04)	30013006	674 (1,486)
250	10	787 (30.98)	350 (13.78)	254 (10.0)	665 (26.18)	310 (12.20)	652 (25.67)	310 (12.20)	30013019	1,180 (2,601)
300	12	838 (32.99)	390 (15.35)	304.8 (12.0)	770 (30.31)	360 (14.17)	722 (28.43)	360 (14.17)	30012979	1,637 (3,609)

(1) For sizes smaller than DN 50/NPS 2 and larger than DN 300/NPS 12, please consult factory.

(2) Bore according to ASME B16.34

(3) Bore larger than ASME B16.34 on 8 in., 10 in. and 12 in. Class 600 valves

## Dimensions and weights – Valve (without stand and lifting lugs)



**Table 9: Full bore design with RTJ flanges – Class 900**

Valve Size <sup>(1)</sup>		Dimensions, mm (in.)							Dimensional Drawing No.	Weight, kg (lb)
DN	NPS	A	B	C <sup>(2)</sup>	D	E	F	G		
50	2	371 (14.61)	155 (6.10)	47.5 (1.87)	225 (8.86)	100 (3.94)	250 (9.84)	100 (3.94)	30012123	71 (157)
80	3	384 (15.12)	150 (5.91)	72.9 (2.87)	280 (11.02)	127.5 (5.02)	298.5 (11.75)	127.5 (5.02)	30012147	113 (249)
100	4	460 (18.11)	190 (7.48)	98.3 (3.87)	335 (13.19)	155 (6.10)	336 (13.23)	155 (6.10)	30012127	191 (421)
150	6	613 (24.13)	245 (9.65)	146.1 (5.75)	455 (17.91)	210 (8.27)	443 (17.44)	210 (8.27)	30012139	452 (996)
200	8	740 (29.13)	300 (11.81)	190.5 (7.50)	545 (21.46)	255 (10.04)	516 (20.31)	255 (10.04)	30012173	796 (1,755)
250	10	841 (33.11)	345 (13.58)	238 (9.37)	650 (25.59)	307.5 (12.11)	626.5 (24.67)	307.5 (12.11)	30012175	1,309 (2,886)
300	12	968 (38.11)	405 (15.94)	282.4 (11.12)	785 (30.91)	372.5 (14.67)	696.5 (27.42)	372.5 (14.67)	30012135	2,119 (4,672)

**Table 10: Full bore design with RTJ flanges – Class 1500**

Valve Size <sup>(1)</sup>		Dimensions, mm (in.)							Dimensional Drawing No.	Weight, kg (lb)
DN	NPS	A	B	C <sup>(2)</sup>	D	E	F	G		
50	2	371 (14.61)	140 (5.51)	47.5 (1.87)	255 (10.04)	115 (4.53)	275 (10.83)	115 (4.53)	30011889	94 (207)
80	3	473 (18.62)	190 (7.48)	69.9 (2.75)	300 (11.81)	137.5 (5.41)	329.5 (12.97)	137.5 (5.41)	30011897	165 (364)
100	4	549 (21.61)	220 (8.66)	91.9 (3.62)	345 (13.58)	155 (6.10)	362 (14.25)	155 (6.10)	30011891	249 (549)
150	6	711 (27.99)	295 (11.61)	136.4 (5.37)	470 (18.50)	215 (8.46)	469 (18.46)	215 (8.46)	30011906	580 (1,279)
200	8	842 (33.15)	340 (13.39)	177.8 (7.00)	590 (23.23)	270 (10.63)	574 (22.60)	270 (10.63)	30011921	1,043 (2,299)
250	10	1,001 (39.41)	420 (16.54)	222.3 (8.75)	715 (28.15)	332.5 (13.09)	703.5 (27.70)	332.5 (13.09)	30011923	1,847 (4,072)
300	12	1,146 (45.12)	465 (18.31)	263.4 (10.37)	815 (32.09)	377.5 (14.86)	748.5 (29.47)	377.5 (14.86)	30011916	2,716 (5,988)

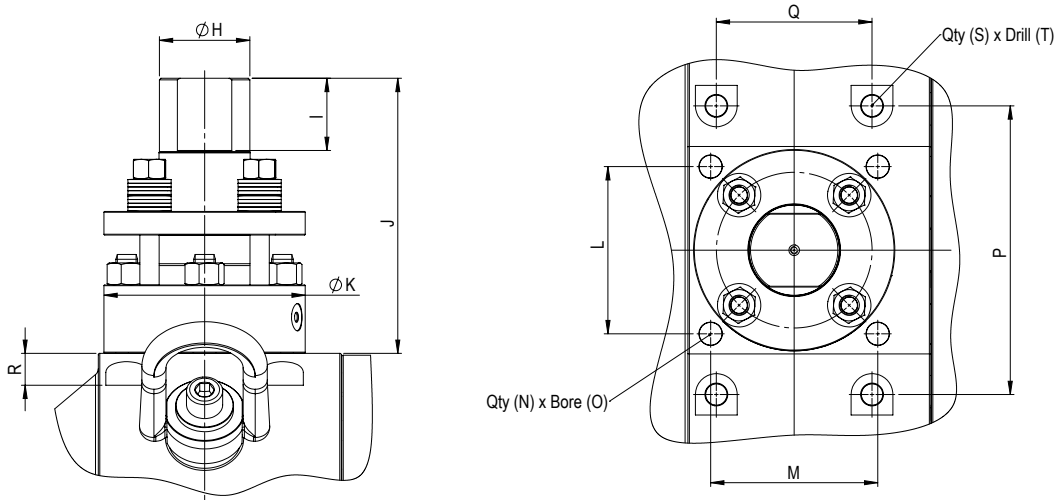
**Table 11: Full bore design with RTJ flanges – Class 2500**

Valve Size <sup>(1)</sup>		Dimensions, mm (in.)							Dimensional Drawing No.	Weight, kg (lb)
DN	NPS	A	B	C <sup>(2)</sup>	D	E	F	G		
50	2	454 (17.87)	175 (6.89)	38.1 (1.50)	260 (10.24)	117.5 (4.63)	293.5 (11.56)	117.5 (4.63)	30011778	130 (287)
80	3	584 (22.99)	255 (10.04)	57.2 (2.25)	320 (12.60)	142.5 (5.61)	344.5 (13.56)	142.5 (5.61)	30011791	249 (549)
100	4	683 (26.89)	300 (11.81)	72.9 (2.87)	365 (14.37)	162.5 (6.40)	375.5 (14.78)	162.5 (6.40)	30011787	371 (818)
150	6	927 (36.50)	385 (15.16)	111 (4.37)	480 (18.90)	215 (8.46)	480 (18.90)	215 (8.46)	30011792	844 (1,861)
200	8	1,038 (40.87)	431 (16.97)	146.1 (5.75)	605 (23.82)	277.5 (10.93)	598.5 (23.56)	277.5 (10.93)	30011547	1,494 (3,294)
250	10	1,292 (50.87)	540 (21.26)	184.2 (7.25)	730 (28.74)	337.5 (13.29)	724.5 (28.52)	337.5 (13.29)	30011795	2,664 (5,873)
300	12	1,444 (56.85)	615 (24.21)	218.9 (8.62)	850 (33.46)	387.5 (15.26)	781.5 (30.77)	387.5 (15.26)	30011805	3,958 (8,726)

(1) For sizes smaller than DN 50/NPS 2 and larger than DN 300/NPS 12, please consult factory.

(2) Bore according to ASME B16.34

## Dimensions – Topworks



**Table 12: Topworks – Class 150**

Valve Size <sup>(1)</sup>		Connection, mm	Dimensions, mm (in.)													Operating Head Drawing No.	
DN	NPS		H	I	J	K	L	M	N	O	P	Q	R	S	T		
									ØH8 - Deep, mm (in.)							Ø, in.	Deep, mm (in.)
50	2	SW14	19 (0.75)	14 (0.55)	132 (5.20)	80 (3.15)	75 (2.95)	60 (2.36)	4	Ø5.00-9 (Ø0.20-0.35)	115 (4.53)	42 (1.65)	18 (0.71)	4	UNC 5/16-18	13 (0.51)	30013582
80	3	SW18	24 (0.94)	18 (0.71)	136 (5.35)	90 (3.54)	90 (3.54)	58 (2.28)	4	Ø6.00-10 (Ø0.24-0.39)	140 (5.51)	40 (1.57)	20 (0.79)	4	UNC 3/8-16	15 (0.59)	30013603
100	4	SW20	29 (1.14)	20 (0.79)	150 (5.91)	100 (3.94)	80 (3.15)	88 (3.46)	4	Ø6.00-10 (Ø0.24-0.39)	145 (5.71)	70 (2.76)	20 (0.79)	4	UNC 3/8-16	15 (0.59)	30013575
150	6	SW30	39 (1.54)	30 (1.18)	164 (6.46)	125 (4.92)	100 (3.94)	114 (4.49)	4	Ø8.00-12 (Ø0.31-0.47)	210 (8.27)	85 (3.35)	32 (1.26)	4	UNC 7/16-14	17 (0.67)	30013620
200	8	SW35	49 (1.93)	35 (1.38)	181 (7.13)	140 (5.51)	110 (4.33)	130 (5.12)	4	Ø10.00-14 (Ø0.39-0.55)	270 (10.63)	95 (3.74)	50 (1.97)	4	UNC 5/8-11	21 (0.83)	30013585
250	10	SW45	59 (2.32)	45 (1.77)	228 (8.98)	160 (6.30)	120 (4.72)	156 (6.14)	4	Ø12.00-16 (Ø0.47-0.63)	325 (12.80)	125 (4.92)	58 (2.28)	4	UNC 5/8-11	21 (0.83)	30013610
300	12	SW55	74 (2.91)	55 (2.17)	238 (9.37)	180 (7.09)	140 (5.51)	168 (6.61)	4	Ø16.00-20 (Ø0.63-0.79)	325 (12.80)	140 (5.51)	45 (1.77)	4	UN 3/4-10	25 (0.98)	30013548

**Table 13: Topworks – Class 300**

Valve Size <sup>(1)</sup>		Connection, mm	Dimensions, mm (in.)													Operating Head Drawing No.	
DN	NPS		H	I	J	K	L	M	N	O	P	Q	R	S	T		
									ØH8 - Deep, mm (in.)							Ø, in.	Deep, mm (in.)
50	2	SW18	24 (0.94)	18 (0.71)	136 (5.35)	90 (3.54)	75 (2.95)	80 (3.15)	4	Ø5.00-9 (Ø0.20-0.35)	115 (4.53)	60 (2.36)	20 (0.79)	4	UNC 3/8-16	15 (0.59)	30013642
80	3	SW25	34 (1.34)	25 (0.98)	155 (6.10)	115 (4.53)	90 (3.54)	108 (4.25)	4	Ø6.00-10 (Ø0.24-0.39)	160 (6.30)	85 (3.35)	32 (1.26)	4	UNC 7/16-14	17 (0.67)	30013646
100	4	SW30	39 (1.54)	30 (1.18)	164 (6.46)	125 (4.92)	105 (4.13)	104 (4.09)	4	Ø8.00-12 (Ø0.31-0.47)	180 (7.09)	85 (3.35)	32 (1.26)	4	UNC 7/16-14	17 (0.67)	30013651
150	6	SW40	54 (2.13)	40 (1.57)	203 (7.99)	145 (5.71)	120 (4.72)	126 (4.96)	4	Ø12.00-16 (Ø0.47-0.63)	250 (9.84)	95 (3.74)	50 (1.97)	4	UNC 5/8-11	21 (0.83)	30013653
200	8	SW50	64 (2.52)	50 (1.97)	233 (9.17)	170 (6.69)	130 (5.12)	148 (5.83)	4	Ø16.00-20 (Ø0.63-0.79)	285 (11.22)	125 (4.92)	50 (1.97)	4	UNC 5/8-11	21 (0.83)	30013669
250	10	SW60	79 (3.11)	60 (2.36)	262 (10.31)	200 (7.87)	160 (6.30)	178 (7.01)	4	Ø16.00-20 (Ø0.63-0.79)	310 (12.20)	150 (5.91)	45 (1.77)	4	UN 3/4-10	25 (0.98)	30013598
300	12	SW70	94 (3.70)	70 (2.76)	290 (11.42)	230 (9.06)	180 (7.09)	210 (8.27)	4	Ø20.00-25 (Ø0.79-0.98)	330 (12.99)	185 (7.28)	40 (1.57)	4	UNC 7/8-9	28 (1.10)	30013545

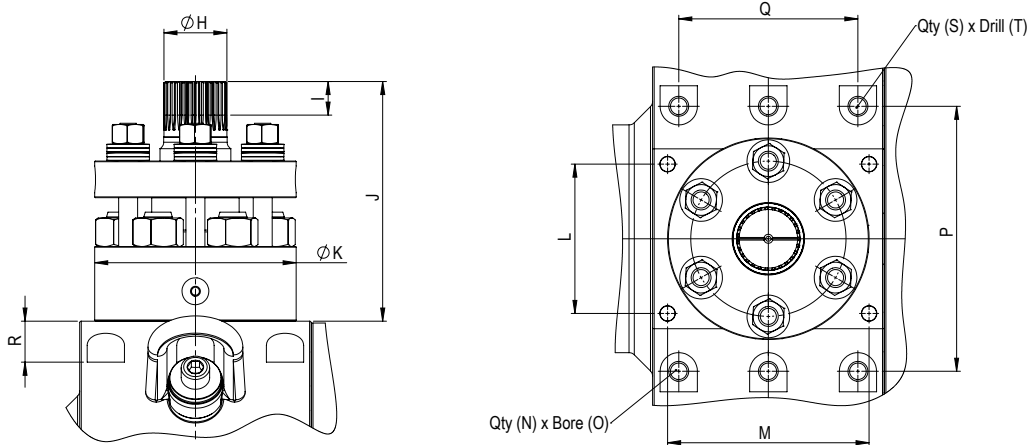
**Table 14: Topworks – Class 600**

Valve Size <sup>(1)</sup>		Connection, mm	Dimensions, mm (in.)													Operating Head Drawing No.	
DN	NPS		H	I	J	K	L	M	N	O	P	Q	R	S	T		
									ØH8 - Deep, mm (in.)							Ø, in.	Deep, mm (in.)
50	2	SW20	29 (1.14)	20 (0.79)	156 (6.14)	110 (4.33)	85 (3.35)	98 (3.86)	4	Ø6.00-10 (Ø0.24-0.39)	145 (5.71)	65 (2.56)	32 (1.26)	4	UNC 7/16-14	17 (0.67)	30012996
80	3	SW30	44 (1.73)	30 (1.18)	171 (6.73)	130 (5.12)	100 (3.94)	114 (4.49)	4	Ø8.00-12 (Ø0.31-0.47)	180 (7.09)	80 (3.15)	40 (1.57)	4	UNC 1/2-13	18 (0.71)	30013014
100	4	SW35	54 (2.13)	35 (1.38)	193 (7.60)	145 (5.71)	115 (4.53)	150 (5.91)	4	Ø10.00-14 (Ø0.39-0.55)	225 (8.86)	115 (4.53)	50 (1.97)	4	UNC 5/8-11	21 (0.83)	30013027
150	6	SW50	74 (2.91)	50 (1.97)	239 (9.41)	200 (7.87)	155 (6.10)	178 (7.01)	4	Ø16.00-20 (Ø0.63-0.79)	270 (10.63)	150 (5.91)	45 (1.77)	4	UNC 3/4-10	25 (0.98)	30012995
200	8	SW65	89 (3.50)	65 (2.56)	285 (11.22)	225 (8.86)	175 (6.89)	218 (8.58)	4	Ø16.00-20 (Ø0.63-0.79)	295 (11.61)	185 (7.28)	40 (1.57)	4	UNC 7/8-9	28 (1.10)	30013010
250	10	SW80	104 (4.09)	80 (3.15)	342 (13.46)	250 (9.84)	200 (7.87)	230 (9.06)	4	Ø25.00-30 (Ø0.98-1.18)	350 (13.78)	210 (8.27)	45 (1.77)	4	UNC 1-8	31 (1.22)	30013024
300	12	SW95	119 (4.69)	95 (3.74)	362 (14.25)	265 (10.43)	220 (8.66)	220 (8.66)	4	Ø30.00-35 (Ø1.18-1.38)	380 (14.96)	205 (8.07)	42 (1.65)	4	UN 1 1/8-8	34 (1.34)	30012980

(1) For sizes smaller than DN 50/NPS 2 and larger than DN 300/NPS 12, please consult factory.



## Dimensions – Topworks, cont'd.



**Table 15: Topworks – Class 900**

Valve Size <sup>(1)</sup>		Connection, mm	Dimensions, mm (in.)													Operating Head Drawing No.		
DN	NPS		H	I	J	K	L	M	N	O		P	Q	R	S		T	
										ØH8 - Deep, mm (in.)	ØH8 - Deep, mm (in.)						Ø, in.	Deep, mm (in.)
50	2	W28x1.25x21	27.75 (1.09)	15 (0.59)	150 (5.91)	115 (4.53)	90 (3.54)	104 (4.09)	4	Ø8.00-12 (Ø0.31-0.47)	165 (6.50)	75 (2.95)	42 (1.65)	6	UNC 7/16-14	17 (0.67)	30012131	
80	3	W40x2x18	39.60 (1.56)	20 (0.79)	171 (6.73)	135 (5.31)	100 (3.94)	120 (4.72)	4	Ø10.00-14 (Ø0.39-0.55)	200 (7.87)	90 (3.54)	50 (1.97)	6	UNC 1/2-13	18 (0.71)	30012170	
100	4	W45x2x21	44.60 (1.76)	25 (0.98)	181 (7.13)	155 (6.10)	110 (4.33)	150 (5.91)	4	Ø10.00-14 (Ø0.39-0.55)	225 (8.86)	115 (4.53)	50 (1.97)	6	UNC 5/8-11	21 (0.83)	30012137	
150	6	W65x3x20	64.40 (2.54)	35 (1.38)	233 (9.17)	200 (7.87)	145 (5.71)	188 (7.40)	4	Ø16.00-20 (Ø0.63-0.79)	310 (12.20)	160 (6.30)	65 (2.56)	6	UNC 3/4-10	25 (0.98)	30012168	
200	8	W80x3x25	79.40 (3.13)	40 (1.57)	261 (10.28)	220 (8.66)	150 (5.91)	240 (9.45)	4	Ø20.00-25 (Ø0.79-0.98)	350 (13.78)	220 (8.66)	65 (2.56)	6	UNC 3/4-10	25 (0.98)	30012177	
250	10	W95x3x30	94.40 (3.72)	50 (1.97)	319 (12.56)	245 (9.65)	170 (6.69)	290 (11.42)	4	Ø25.00-30 (Ø0.98-1.18)	375 (14.76)	275 (10.83)	60 (2.36)	6	UNC 7/8-9	28 (1.10)	30012178	
300	12	W110x3x35	109.40 (4.31)	55 (2.17)	324 (12.76)	260 (10.24)	200 (7.87)	330 (12.99)	4	Ø30.00-35 (Ø1.18-1.38)	460 (18.11)	320 (12.60)	75 (2.95)	6	UNC 1-8	31 (1.22)	30012136	

**Table 16: Topworks – Class 1500**

Valve Size <sup>(1)</sup>		Connection, mm	Dimensions, mm (in.)													Operating Head Drawing No.		
DN	NPS		H	I	J	K	L	M	N	O		P	Q	R	S		T	
										ØH8 - Deep, mm (in.)	ØH8 - Deep, mm (in.)						Ø, in.	Deep, mm (in.)
50	2	W28x1.25x21	27.75 (1.09)	15 (0.59)	160 (6.30)	120 (4.72)	90 (3.54)	114 (4.49)	4	Ø8.00-12 (Ø0.31-0.47)	180 (7.09)	85 (3.35)	42 (1.65)	6	UNC 7/16-14	17 (0.67)	30011895	
80	3	W40x2x18	39.60 (1.56)	20 (0.79)	192 (7.56)	145 (5.71)	100 (3.94)	140 (5.51)	4	Ø10.00-14 (Ø0.39-0.55)	220 (8.66)	110 (4.33)	55 (2.17)	6	UNC 1/2-13	18 (0.71)	30011914	
100	4	W45x2x21	44.60 (1.76)	25 (0.98)	207 (8.15)	180 (7.09)	130 (5.12)	170 (6.69)	4	Ø10.00-14 (Ø0.39-0.55)	250 (9.84)	135 (5.31)	58 (2.28)	6	UNC 5/8-11	21 (0.83)	30011903	
150	6	W65x3x20	64.40 (2.54)	35 (1.38)	254 (10.00)	215 (8.46)	150 (5.91)	208 (8.19)	4	Ø16.00-20 (Ø0.63-0.79)	320 (12.60)	180 (7.09)	65 (2.56)	6	UNC 3/4-10	25 (0.98)	30011915	
200	8	W85x3x27	84.40 (3.32)	45 (1.77)	304 (11.97)	250 (9.84)	200 (7.87)	230 (9.06)	4	Ø20.00-25 (Ø0.79-0.98)	400 (15.75)	200 (7.87)	80 (3.15)	6	UNC 1-8	31 (1.22)	30011922	
250	10	W100x3x32	99.40 (3.91)	50 (1.97)	371 (14.61)	275 (10.83)	215 (8.46)	270 (10.63)	4	Ø25.00-30 (Ø0.98-1.18)	365 (14.37)	245 (9.65)	42 (1.65)	6	UN 1 1/8-8	34 (1.34)	30011928	
300	12	W120x3x38	119.40 (4.70)	60 (2.36)	371 (14.61)	305 (12.01)	250 (9.84)	310 (12.20)	4	Ø30.00-35 (Ø1.18-1.38)	420 (16.54)	290 (11.42)	50 (1.97)	6	UN 1 1/8-8	37 (1.46)	30011920	

**Table 17: Topworks – Class 2500**

Valve Size <sup>(1)</sup>		Connection, mm	Dimensions, mm (in.)													Operating Head Drawing No.		
DN	NPS		H	I	J	K	L	M	N	O		P	Q	R	S		T	
										ØH8 - Deep, mm (in.)	ØH8 - Deep, mm (in.)						Ø, in.	Deep, mm (in.)
50	2	W28x1.25x21	27.75 (1.09)	15 (0.59)	176 (6.93)	140 (5.51)	90 (3.54)	144 (5.67)	4	Ø8.00-12 (Ø0.31-0.47)	185 (7.28)	115 (4.53)	42 (1.65)	6	UNC 7/16-14	17 (0.67)	30011782	
80	3	W40x2x18	39.60 (1.56)	20 (0.79)	202 (7.95)	175 (6.89)	120 (4.72)	170 (6.69)	4	Ø10.00-14 (Ø0.39-0.55)	230 (9.06)	140 (5.51)	50 (1.97)	6	UNC 1/2-13	18 (0.71)	30011793	
100	4	W45x2x21	44.60 (1.76)	25 (0.98)	213 (8.39)	195 (7.68)	145 (5.71)	200 (7.87)	4	Ø10.00-14 (Ø0.39-0.55)	250 (9.84)	165 (6.50)	50 (1.97)	6	UNC 5/8-11	21 (0.83)	30011797	
150	6	W65x3x20	64.40 (2.54)	35 (1.38)	265 (10.43)	240 (9.45)	170 (6.69)	228 (8.98)	4	Ø16.00-20 (Ø0.63-0.79)	300 (11.81)	200 (7.87)	45 (1.77)	6	UNC 3/4-10	25 (0.98)	30011802	
200	8	W85x3x27	84.40 (3.32)	45 (1.77)	321 (12.64)	270 (10.63)	200 (7.87)	270 (10.63)	4	Ø20.00-25 (Ø0.79-0.98)	355 (13.98)	240 (9.45)	55 (2.17)	6	UNC 1-8	31 (1.22)	30011549	
250	10	W100x3x32	99.40 (3.91)	50 (1.97)	387 (15.24)	315 (12.40)	235 (9.25)	310 (12.20)	4	Ø25.00-30 (Ø0.98-1.18)	405 (15.94)	285 (11.22)	55 (2.17)	6	UN 1 1/8-8	34 (1.34)	30011804	
300	12	W120x3x38	119.40 (4.70)	60 (2.36)	394 (15.51)	350 (13.78)	290 (11.42)	350 (13.78)	4	Ø30.00-35 (Ø1.18-1.38)	450 (17.72)	330 (12.99)	50 (1.97)	6	UN 1 1/4-8	37 (1.46)	30011809	

(1) For sizes smaller than DN 50/NPS 2 and larger than DN 300/NPS 12, please consult factory.

## Torques

**Table 18: Torque BTO by differential pressure<sup>(1)</sup> – Class 150**

Valve Size <sup>(2)</sup>		Torque BTO, Nm (lb-in.)					
		Differential Pressure, bar (psi)					
DN	NPS	0 (0)	4 (58)	8 (116)	12 (174)	16 (232)	20 (290)
50	2	101 (894)	111 (982)	122 (1,080)	133 (1,177)	144 (1,275)	154 (1,363)
80	3	165 (1,460)	202 (1,788)	238 (2,107)	274 (2,425)	311 (2,753)	347 (3,071)
100	4	193 (1,708)	272 (2,407)	350 (3,098)	428 (3,788)	506 (4,479)	584 (5,169)
150	6	280 (2,478)	524 (4,638)	768 (6,798)	1,012 (8,957)	1,255 (11,108)	1,499 (13,268)
200	8	381 (3,372)	860 (7,612)	1,339 (11,851)	1,818 (16,091)	2,298 (20,340)	2,777 (24,579)
250	10	495 (4,381)	1,349 (11,940)	2,203 (19,499)	3,057 (27,058)	3,911 (34,616)	4,765 (42,175)
300	12	774 (6,851)	2,265 (20,048)	3,757 (33,253)	5,248 (46,450)	6,740 (59,656)	8,232 (72,861)

**Table 19: Torque BTO by differential pressure<sup>(1)</sup> – Class 300**

Valve Size <sup>(2)</sup>		Torque BTO, Nm (lb-in.)					
		Differential Pressure, bar (psi)					
DN	NPS	0 (0)	10 (145)	20 (290)	30 (435)	40 (580)	50 (725)
50	2	101 (8,94)	128 (1,133)	156 (1,381)	183 (1,620)	211 (1,868)	238 (2,107)
80	3	165 (1,460)	259 (2,292)	352 (3,116)	445 (3,939)	539 (4,771)	632 (5,594)
100	4	193 (1,708)	392 (3,470)	590 (5,222)	788 (6,975)	987 (8,736)	1,185 (10,488)
150	6	280 (2,478)	897 (7,939)	1,513 (13,392)	2,130 (18,853)	2,746 (24,305)	3,363 (29,766)
200	8	381 (3,372)	1,587 (14,047)	2,794 (24,730)	4,000 (35,404)	5,206 (46,078)	6,413 (56,761)
250	10	495 (4,381)	2,645 (23,411)	4,794 (42,432)	6,944 (61,461)	9,094 (80,491)	11,243 (99,512)
300	12	774 (6,851)	4,448 (39,369)	8,122 (71,888)	11,795 (104,398)	15,469 (136,916)	19,143 (169,435)

**Table 20: Torque BTO by differential pressure<sup>(1)</sup> – Class 600**

Valve Size <sup>(2)</sup>		Torque BTO, Nm (lb-in.)					
		Differential Pressure, bar (psi)					
DN	NPS	0 (0)	20 (290)	40 (580)	60 (870)	80 (1160)	100 (1,450)
50	2	102 (903)	171 (1,514)	239 (2,115)	307 (2,717)	376 (3,328)	444 (3,930)
80	3	169 (1,496)	402 (3,558)	636 (5,629)	870 (7,700)	1,103 (9,763)	1,337 (11,834)
100	4	207 (1,832)	704 (6,231)	1,201 (10,630)	1,699 (15,038)	2,196 (19,437)	2,693 (23,836)
150	6	312 (2,762)	1,846 (16,339)	3,380 (29,916)	4,914 (43,494)	6,447 (57,062)	7,981 (70,640)
200	8	457 (4,045)	3,450 (30,536)	6,442 (57,018)	9,435 (83,509)	12,428 (110,000)	15,420 (136,482)
250	10	701 (6,205)	6,060 (53,637)	11,419 (101,070)	16,779 (148,511)	22,138 (195,943)	27,497 (243,376)
300	12	1,120 (9,913)	10,202 (90,298)	19,285 (170,692)	28,367 (251,076)	37,449 (331,461)	46,531 (411,846)

**Table 21: Torque BTO by differential pressure<sup>(1)</sup> – Class 900**

Valve Size <sup>(2)</sup>		Torque BTO, Nm (lb-in.)					
		Differential Pressure, bar (psi)					
DN	NPS	0 (0)	30 (435)	60 (870)	90 (1,305)	120 (1,740)	150 (2,176)
50	2	102 (903)	188 (1,664)	274 (2,425)	360 (3,186)	446 (3,948)	532 (4,709)
80	3	167 (1,478)	480 (4,248)	794 (7,028)	1,107 (9,798)	1,420 (12,568)	1,734 (15,348)
100	4	205 (1,814)	887 (7,851)	1,569 (13,887)	2,252 (19,932)	2,934 (25,969)	3,616 (32,005)
150	6	298 (2,638)	2,348 (20,782)	4,398 (38,927)	6,448 (57,071)	8,498 (75,216)	10,548 (93,360)
200	8	409 (3,620)	4,161 (36,829)	7,913 (70,038)	11,666 (103,256)	15,418 (136,465)	19,170 (169,674)
250	10	660 (5,842)	7,313 (64,727)	13,966 (123,613)	20,620 (182,508)	27,273 (241,393)	33,926 (300,279)
300	12	999 (8,842)	11,990 (106,123)	22,981 (203,405)	33,971 (300,677)	44,962 (397,959)	55,953 (495,240)

(1) Assumptions: operating temperature = atmospheric; medium characteristic = lubricating; cycle frequency = daily.

(2) For sizes smaller than DN 50/NPS 2 and larger than DN 300/NPS 12, please consult factory.

## Torques, cont'd.

**Table 22: Torque BTO by differential pressure<sup>(1)</sup> – Class 1500**

Valve Size <sup>(2)</sup>		Torque BTO, Nm (lb-in.)					
		Differential Pressure, bar (psi)					
DN	NPS	0 (0)	50 (725)	100 (1,450)	150 (2,176)	200 (2,901)	250 (3,626)
50	2	102 (903)	246 (2,177)	389 (3,443)	532 (4,709)	675 (5,974)	818 (7,240)
80	3	165 (1,460)	631 (5,585)	1,098 (9,718)	1,564 (13,843)	2,030 (17,968)	2,496 (22,092)
100	4	203 (1,797)	1,147 (10,152)	2,091 (18,507)	3,034 (26,854)	3,978 (35,209)	4,921 (43,556)
150	6	283 (2,505)	3,110 (27,527)	5,937 (52,548)	8,765 (77,579)	11,592 (102,601)	14,419 (127,623)
200	8	376 (3,328)	5,566 (49,265)	10,757 (95,210)	15,947 (141,147)	21,137 (187,084)	26,328 (233,029)
250	10	564 (4,992)	9,737 (86,182)	18,910 (167,372)	28,083 (248,563)	37,256 (329,753)	46,429 (410,943)
300	12	874 (7,736)	15,957 (141,235)	31,039 (274,726)	46,122 (408,226)	61,205 (541,725)	76,288 (675,225)

**Table 23: Torque BTO by differential pressure<sup>(1)</sup> – Class 2500**

Valve Size <sup>(2)</sup>		Torque BTO, Nm (lb-in.)					
		Differential Pressure, bar (psi)					
DN	NPS	0 (0)	80 (1,160)	160 (2,321)	240 (3,481)	320 (4,641)	400 (5,802)
50	2	97 (859)	248 (2,195)	399 (3,532)	549 (4,859)	700 (6,196)	851 (7,532)
80	3	162 (1,434)	683 (6,045)	1,205 (10,665)	1,726 (15,277)	2,248 (19,897)	2,770 (24,517)
100	4	193 (1,708)	1,125 (9,957)	2,056 (18,198)	2,988 (26,447)	3,919 (34,687)	4,851 (42,936)
150	6	269 (2,381)	3,218 (28,483)	6,167 (54,584)	9,116 (80,686)	12,065 (106,787)	15,013 (132,880)
200	8	320 (2,832)	5,835 (51,646)	11,350 (100,459)	16,865 (149,272)	22,380 (198,085)	27,895 (246,899)
250	10	427 (3,779)	10,422 (92,245)	20,417 (180,711)	30,412 (269,177)	40,407 (357,642)	50,401 (446,099)
300	12	625 (5,532)	17,156 (151,848)	33,687 (298,164)	50,218 (444,480)	66,749 (590,795)	83,280 (737,111)

**Table 24: Operating torque – Class 150 through Class 2500**

Valve Size <sup>(2)</sup>		Operating Torques					
DN	NPS	BTO	RTO	ETO	BTC	RTC	ETC
50	2	100%	65%	70%	75%	65%	95%
80	3	100%	65%	70%	75%	65%	95%
100	4	100%	65%	70%	75%	65%	95%
150	6	100%	60%	65%	70%	60%	95%
200	8	100%	60%	65%	70%	60%	95%
250	10	100%	55%	60%	65%	55%	95%
300	12	100%	55%	60%	65%	55%	95%

(1) Assumptions: operating temperature = atmospheric; medium characteristic = lubricating; cycle frequency = daily.

(2) For sizes smaller than DN 50/NPS 2 and larger than DN 300/NPS 12, please consult factory.

# MAST

**Table 25: Maximum allowable stem torque**

Valve Size <sup>(1)</sup>		ASME Pressure Class	Material	MAST	
DN	NPS			Nm	in.-lb
50	2	Class 150	A638, Grade 660	494	4,372
		Class 300		1,020	9,027
		Class 600		1,552	13,735
		Class 900	Inconel 718	2,500	22,124
		Class 1500		2,896	25,628
		Class 2500		2,896	25,628
80	3	Class 150	A638, Grade 660	1,020	9,027
		Class 300		2,785	24,646
		Class 600		5,285	46,770
		Class 900	Inconel 718	7,356	65,097
		Class 1500		8,892	78,690
		Class 2500		8,892	78,690
100	4	Class 150	A638, Grade 660	1,552	13,735
		Class 300		4,524	40,035
		Class 600		8,927	79,000
		Class 900	Inconel 718	11,484	101,628
		Class 1500		14,126	125,009
		Class 2500		14,126	125,009
150	6	Class 150	A638, Grade 660	4,524	40,035
		Class 300		11,225	99,336
		Class 600		24,641	218,062
		Class 900	Inconel 718	34,441	304,788
		Class 1500		42,392	375,151
		Class 2500		42,392	375,151
200	8	Class 150	A638, Grade 660	7,896	69,876
		Class 300		20,375	180,310
		Class 600		48,872	432,496
		Class 900	Inconel 718	62,129	549,814
		Class 1500		91,294	807,912
		Class 2500		91,294	807,912
250	10	Class 150	A638, Grade 660	15,356	135,894
		Class 300		36,508	323,080
		Class 600		84,889	751,230
		Class 900	Inconel 718	103,173	913,036
		Class 1500		153,892	1,361,876
		Class 2500		153,892	1,361,876
300	12	Class 150	A638, Grade 660	28,964	256,319
		Class 300		59,456	526,159
		Class 600		134,975	1,194,469
		Class 900	Inconel 718	162,799	1,440,700
		Class 1500		253,057	2,239,443
		Class 2500		253,057	2,239,443

(1) For sizes smaller than DN 50/NPS 2 and larger than DN 300/NPS 12, please consult factory.

## Bolting – Tightening torques

**Table 26: Bolting tightening torques for body bolting**

Thread Size	Torque by Bolting Material					
	ASTM A193 B7		ASTM A193 B7M		ASTM A453 Grade 660	
	Nm	ft-lb	Nm	ft-lb	Nm	ft-lb
UNC 5/16-18	24	18	18	13	19	14
UNC 3/8-16	41	30	31	23	33	24
UNC 7/16-14	64	47	49	36	52	38
UNC 1/2-13	102	75	78	58	82	60
UNC 9/16-12	138	102	104	77	111	82
UNC 5/8-11	200	148	150	111	160	118
UNC 3/4-10	350	258	265	195	280	207
UNC 7/8-9	555	409	420	310	450	332
UNC 1-8	830	612	625	461	665	491
UN 1 1/8-8	1,200	885	905	668	965	712
UN 1 1/4-8	1,660	1,224	1,260	929	1,340	988
UN 1 3/8-8	2,220	1,637	1,690	1,247	1,795	1,324
UN 1 1/2-8	2,910	2,146	2,210	1,630	2,350	1,733
UN 1 5/8-8	3,740	2,759	2,845	2,098	3,025	2,231
UN 1 3/4-8	4,700	3,467	3,555	2,622	3,780	2,788
UN 1 7/8-8	5,800	4,278	4,395	3,242	4,675	3,448
UN 2-8	7,000	5,163	5,350	3,946	5,690	4,197
UN 2 1/4-8	10,100	7,450	7,700	5,680	8,190	6,041
UN 2 1/2-8	13,900	10,253	10,590	7,811	11,260	8,305
UN 2 3/4-8	16,100	13,129	13,500	9,958	14,400	10,621
UN 3-8	21,000	17,112	17,600	12,982	18,700	13,793

**Table 27: Tightening torque for live loading**

Valve Size <sup>(1)</sup>		ASME Pressure Class	Torque	
DN	NPS		Nm	ft-lb
50	2	Class 150	16	12
		Class 300	19	14
		Class 600	28	21
		Class 900	16	12
		Class 1500	20	15
		Class 2500	23	17
80	3	Class 150	19	14
		Class 300	30	22
		Class 600	43	32
		Class 900	26	19
		Class 1500	45	33
		Class 2500	51	38
100	4	Class 150	28	21
		Class 300	38	28
		Class 600	80	59
		Class 900	35	26
		Class 1500	48	35
		Class 2500	48	35
150	6	Class 150	38	28
		Class 300	80	59
		Class 600	126	93
		Class 900	90	66
		Class 1500	93	69
		Class 2500	93	69

Valve Size <sup>(1)</sup>		ASME Pressure Class	Torque	
DN	NPS		Nm	ft-lb
200	8	Class 150	45	33
		Class 300	111	82
		Class 600	220	162
		Class 900	126	93
		Class 1500	210	155
		Class 2500	223	164
250	10	Class 150	111	82
		Class 300	197	145
		Class 600	421	311
		Class 900	263	194
		Class 1500	374	276
		Class 2500	400	295
300	12	Class 150	126	93
		Class 300	220	162
		Class 600	495	365
		Class 900	281	207
		Class 1500	369	272
		Class 2500	461	340

(1) For sizes smaller than DN 50/NPS 2 and larger than DN 300/NPS 12, please consult factory.

## Leakage rates with gas

**Table 28: FCI 70-2 Class VI**

Valve Size <sup>(1)</sup>		Test Duration, s	Leakage Rates <sup>(2)</sup>	
DN	NPS		ml/min.	Bubbles/min.
50	2	60	0.45	3
80	3	60	0.90	6
100	4	60	1.70	11
150	6	60	4.00	27
200	8	60	6.75	45
250	10	60	11.1	74
300	12	60	16.0	106

**Table 29: MSS SP-61**

Valve Size <sup>(1)</sup>		Test Duration, s	Leakage Rates, ml/hr per NPS
DN	NPS		
50	2	15	20
80	3	30	30
100	4	30	40
150	6	30	60
200	8	30	80
250	10	60	100
300	12	60	120

**Table 30: API 598**

Valve Size <sup>(1)</sup>		Test Duration, s		Leakage Rates, Bubbles/min.
DN	NPS	Closure	Back Seat	
50	2	15	15	0
80	3	60	60	16
100	4	60	60	20
150	6	60	60	24
200	8	120	60	32
250	10	120	60	40
300	12	120	60	48

(1) For sizes smaller than DN 50/NPS 2 and larger than DN 300/NPS 12, please consult factory.

(2) 0.15 ml/min = 1 bubble/min

## Flowserve Purging System

### Eliminate valve lock-up with fastest purge cycle available

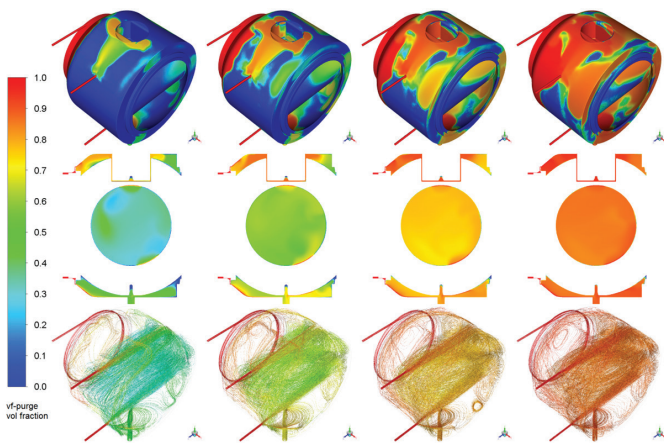
Developed in conjunction with the Argus FK75F ball valve, the Flowserve Purging System prevents valve lock-up and significantly reduces the costs to purge valves in severe services. It delivers the fastest purging cycle times in the industry — 60 to 90 seconds<sup>(1)</sup>, compared to up to 8 minutes with other systems. Incorporating multiple purge ports and a drain to match unique process requirements, the Flowserve Purging System helps operators:

- Eliminate valve lock-up and the associated downtime
- Maintain acceptable turning torque
- Prevent ball coating damage by removing solids in the body cavity surrounding the ball and seats
- Hold tight shut-off conditions
- Provide critical service ball and control valve warm-up with a non-flashing fluid to prevent valve damage

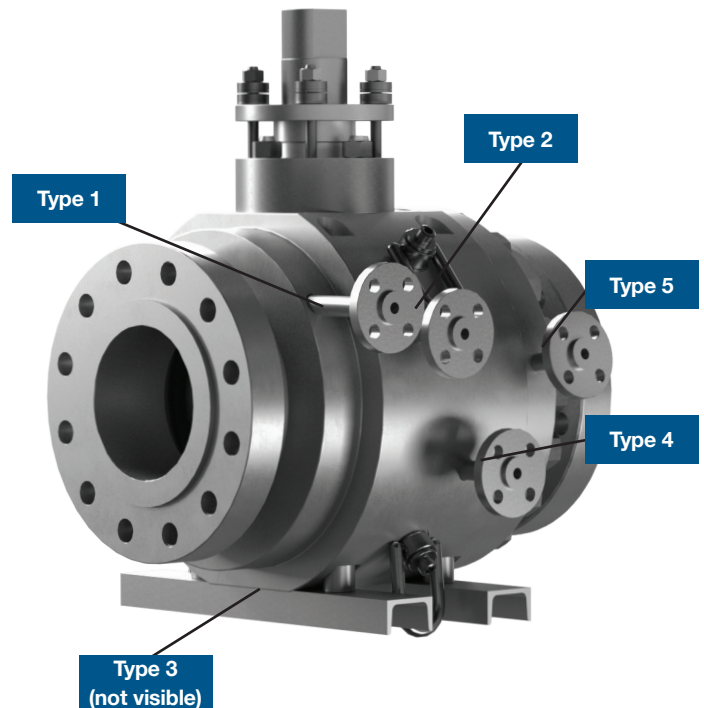
### Proven performance of port sizes and locations

Flowserve engineers used advanced computational fluid dynamics (CFD) and finite element analysis (FEA) tools to optimize the size and location of the ports to significantly speed up cycle times and consume less purge media. Designed for each application, the Flowserve Purging System on Argus FK75F ball valves can include up to four purge ports and a drain:

- Type 1 purge that continuously cleans the spring and seat pockets while maintaining positive cavity pressure.



- Type 2 and 4 purges that quickly flush out the cavity after the valve is closed, instead of the continuous purging other manufacturers recommend. Intermittent purging combined with our faster cycle times means you will consume less steam, diesel or VGO purge fluid.
- Type 3 purging drains the media through a bottom valve.
- Type 5 downstream purging can be added for more aggressive applications.



(1) Purging times could vary based on different applications.



Flowserve Corporation  
5215 North O'Connor Blvd.  
Suite 700  
Irving, Texas 75039-5421 USA

**VATB000557-04 (EN/A4)** February 2024

Flowserve Corporation has established industry leadership in the design and manufacture of its products. When properly selected, this Flowserve product is designed to perform its intended function safely during its useful life. However, the purchaser or user of Flowserve products should be aware that Flowserve products might be used in numerous applications under a wide variety of industrial service conditions. Although Flowserve can provide general guidelines, it cannot provide specific data and warnings for all possible applications. The purchaser/user must therefore assume the ultimate responsibility for the proper sizing and selection, installation, operation, and maintenance of Flowserve products. The purchaser/user should read and understand the Installation Instructions included with the product, and train its employees and contractors in the safe use of Flowserve products in connection with the specific application.

While the information and specifications contained in this literature are believed to be accurate, they are supplied for informative purposes only and should not be considered certified or as a guarantee of satisfactory results by reliance thereon. Nothing contained herein is to be construed as a warranty or guarantee, express or implied, regarding any matter with respect to this product. Because Flowserve is continually improving and upgrading its product design, the specifications, dimensions and information contained herein are subject to change without notice. Should any question arise concerning these provisions, the purchaser/user should contact Flowserve Corporation at any one of its worldwide operations or offices.

©2024 Flowserve Corporation. All rights reserved. This document contains registered and unregistered trademarks of Flowserve Corporation. Other company, product, or service names may be trademarks or service marks of their respective companies.